

**UNITED STATES DEPARTMENT OF COMMERCE****Patent and Trademark Offic**

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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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|-----------------|-------------|----------------------|---------------------|

09/242,803 02/24/99 EL KHIATI

N 3633-462

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| <input type="checkbox"/> | IM22/1218 | <input type="checkbox"/> | EXAMINER |
|--------------------------|-----------|--------------------------|----------|

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SAMPLE, D

| ART UNIT | PAPER NUMBER |
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1755

**DATE MAILED:** 12/18/00

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

|                              |                 |                  |
|------------------------------|-----------------|------------------|
| <b>Office Action Summary</b> | Application No. | Applicant(s)     |
|                              | 09/242,803      | EL KHIATI ET AL. |
| Examiner                     | Art Unit        |                  |
| David R. Sample              | 1755            |                  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 02 October 2000.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 19,20 and 23-32 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 19,20 and 23-32 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved.
- 12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
  - a) All b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

**Attachment(s)**

- 15) Notice of References Cited (PTO-892)
- 16) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 18) Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 19) Notice of Informal Patent Application (PTO-152)
- 20) Other: \_\_\_\_\_

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## **DETAILED ACTION**

Any rejections and/or objections, made in the previous Office Action, and not repeated below, are hereby withdrawn.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Objections***

Claim 32 is objected to because of the following informalities:

Claim 32, lines 2-3 recites that the article is in the form of a "plasma-screen substrate and an electroluminescent-screen substrate". The examiner believes that the "and" should be deleted.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

Claims 29 and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 19 recites that the strain point is greater than 570°C. Claims 29 and 32, which depend from claim 19, recite a strain point of "greater than 507°C" and "between 530 and 590°C", respectively. Thus, claims 29 and 30 describe ranges that are broader than the claim 19 range.

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***Claim Rejections - 35 USC § 102***

Claims 19, 20 and 23-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Khiati et al. (US Patent No. 6,063,718).

The applied reference has a common assignee and inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Khiati et al. discloses glass compositions that have amounts of components that fall within the ranges recited in instant claims 19 and 25-27.<sup>1</sup> See Example 1, in the Table in col's 7-8. Moreover, the composition of the reference is sufficiently specific to anticipate the composition described by instant claims 19 and 25-28. See the Abstract and MPEP 2131.03.

The reference discloses glasses having strain points in excess of 570 and even 600°C. See the abstract and col. 2, lines 41-42. The reference further discloses glasses having thermal expansion coefficients of between 80 and  $90 \times 10^{-7}/K$  at col. 3, lines 31-36.

The reference fails to disclose the recited values of working point, softening point,  $\phi$  or  $\phi^2 \cdot c/a$ . However, the values of the recited properties for a glass are dependent upon the glass composition, and the how the glass is made. The glass recited by Khiati et al. has a glass composition that is identical to the glass recited in instant claims 19 and 25-28. See the abstract.

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Moreover, the glass is made in a manner that is identical to the method applicants' employ in forming their glass. In particular, the glass is melted, formed, and thermally toughened. See col. 8, lines 12-17 of Khiati et al. and page 16, lines 1-12 of the specification. Accordingly, the properties of working point, softening point,  $\phi$ , and  $\phi^2 \cdot c/a$  recited in claims 19, 20, 23, 24, 29, and 30 are assumed to be inherent to the glass of Koch et al. because the glass of Koch et al. has the same composition and is made in the same manner. See MPEP 2112.

As to  $\rho_{250^\circ\text{C}}$  recited by instant claims 29 and 30, the reference discloses a  $\rho_{250^\circ\text{C}}$  for the glasses of greater than 9. See col. 9, lines 31-34.

The recitations of instant claims 31 and 32 are disclosed in the reference at col. 9, lines 36-43.

Claims 19, 20, and 23-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Siedel et al. (US Patent No. 5,990,023).

It appears that the applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

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<sup>1</sup> The Na<sub>2</sub>O content of claim 25 is anticipated by Example 1 of the reference when the amount of Na<sub>2</sub>O is calculated to one significant figure, i.e., 4.5 wt% Na<sub>2</sub>O is 5 wt% Na<sub>2</sub>O to one significant figure.

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Siedel et al. discloses glasses that have a thermal stress factor of 0.69 and 0.76 N/(mm<sup>2</sup>•K), and transformation points of 1061 and 1190°C. See col. 4, lines 7-12 and col. 5, lines 2-8. The "transformation point" is the temperature where the glass has a viscosity of 10<sup>4</sup> dPa•s. See col. 3, lines 27-28. This definition is identical to the definition of "working temperature" recited in the specification. See page 6, lines 25-26 of the instant specification. Thus, Siedel et al. discloses a glass having a working temperature of less than 1200°C. The reference discloses glasses having a thermal expansion of 7.6x10<sup>-6</sup>K<sup>-1</sup> and 7.9x10<sup>-6</sup> K<sup>-1</sup> at col. 4, lines 7-8 and col. 5, lines 3-4.

As to claim 20, Siedel et al. discloses glasses having softening temperatures of 761 and 800°C. See col. 4, lines 7-12 and col. 5, lines 2-8.

As to the strain points recited in claims 19, 23, 29 and 30, the reference fails to disclose a strain point associated with the disclosed glasses. However, a glass' composition determines its viscosity characteristics upon heating. The glass disclosed by Siedel et al. is identical to the glass described by instant claims 25-28. See col. 4, lines 65-67. Therefore, because the glass of Siedel is identical to the presently claimed glass, the glass of Siedel et al. is assumed to inherently possess the recited strain points. See MPEP 2112.

As to the remainder of claim 23, Siedel et al. discloses a glass having working point of 1061 and 1190°C, and a thermal expansion coefficient of 7.9 x 10<sup>-6</sup> /K. See col. 4, lines 7-12, col. 5, lines 3-9. These properties fall within the ranges recited in instant claim 23. The reference discloses that the glass has a softening point of 750 to 830°C. See col. 5, lines 37-38.

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This range is sufficiently specific to anticipate the range recited in instant claim 23. See MPEP 2131.03.

As to claim 24, the reference fails to disclose the recited values of  $\phi^2 \cdot c/a$ . However, the value of the recited property for a glass is dependent upon the glass composition, and the how the glass is made. The glass recited by Siedel et al. has a glass composition that is identical to the glass recited in instant claims 19 and 25-28. See col. 4, lines 65-67. Moreover, the glass is made in a manner that is identical to the method applicants' employ in forming their glass. In particular, the glass is melted, formed, and thermally toughened. See col. 3, lines 66 to col. 4 line 27, and col. 5, lines 10-15 of Siedel et al. and page 16, lines 1-12 of the specification. Accordingly, the property of " $\phi^2 \cdot c/a$ " recited in instant claim 24 is assumed to be inherent to the glass of Siedel et al. because the glass of Siedel et al. has the same composition and is made in the same manner. See MPEP 2112.

The glass composition disclosed by Siedel et al. at column 4, lines 65-67 has amounts of components that fall within the ranges of components recited in instant claims 19 and 25-28. As to claim 28, it is noted that the claim recites a lower limit for SrO of 3 wt% whereas the reference discloses 2.5 wt% SrO. However, the SrO content in claim 28 is claimed in one significant figure. The amount of SrO disclosed by Siedel et al. is recited in two significant figures, i.e., 2.5 wt%. See col. 4, line 66. If the SrO of Siedel et al. were recited as one significant figure, it would be 3 wt%. Thus, the reference discloses a glass having 3 wt% SrO. Therefore, the reference is deemed to anticipate instant claim 28.

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As to the  $\varphi$  recited in instant claim 29, the reference discloses a glass that has a thermal stress factor of 0.76 N/(mm<sup>2</sup> K). See col. 5, lines 4-5.

As to the  $\log \rho_{(250^\circ)}$  recited in claims 29 and 30, the  $\log \rho_{(250^\circ)}$  of a glass is dependent upon its glass composition. The glass of Siedel et al. is identical to the glass recited in instant claims 25-28. See col. 4, lines 65-67. Accordingly, the property of  $\log \rho_{(250^\circ)}$  recited in instant claims 29 and 30 is assumed to be inherent to the glass of Siedel et al. because the glass composition of Siedel et al. is identical instantly claimed composition. See MPEP 2112.

As to claims 31 and 32, the reference discloses forming a monolithic glazing pane from the disclosed glass compositions. See col. 3, lines 11-12.

#### ***Claim Rejections - 35 USC § 103***

Claims 19, 20 and 23-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koch et al. (WO 96/11887).

The rejection is over WO 96/118876. However, for convenience, the column and line numbers have been cited for the English language equivalent document US 5,776,844.

Koch et al. discloses a glass that has overlapping ranges of components with the glass recited in instant claims 19, and 25-28. See col. 2, lines 1-22. Overlapping ranges have been held to establish *prima facie* obviousness. See MPEP 2144.05. In addition, the glass of Koch et al. is made in a manner that is identical to the method employed by applicants in forming their glass. In particular, the glass is melted formed and thermally toughened. See col. 6, lines 39-50 of Koch et al. and page 16, lines 1-12 of the specification.

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Koch et al. fails to disclose the " $\phi$ " recited in instant claims 19 and 29. The value of  $\phi$  for a glass depends upon composition of the glass, and the how the glass is made. As noted above, the glass of Koch et al. has overlapping ranges of components with the glass of instant claims 25-28, and the glass of Koch et al. is made in a manner that is identical to the glass of the instant invention. See col. 2, lines 1-22 and col. 6, lines 39-50. Therefore, one of ordinary skill in the art would expect that glass having the overlapping portion of the ranges recited in Koch et al. would have the claimed  $\phi$ .

The viscosity characteristics of a glass depend upon the composition of the glass. Thus, softening temperature (temperature where the viscosity is  $10^{7.6}$ ) and working temperature (temperature where the viscosity is  $10^4$ ) depend upon the composition of the glass. As noted previously, Koch et al. discloses a glass having overlapping ranges of components with the glass recited in instant claims 25-28. See col. 2, lines 1-22. Therefore, one of ordinary skill in the art would expect that the glass having the overlapping portion of the ranges recited in Koch et al. claims would have the softening temperature recited in instant claims 20 and 23, and the working temperature recited in instant claims 19 and 23.

As to the thermal expansion coefficient recited in instant claims 19 and 23, the reference discloses a glass having a thermal expansion coefficient of 80 to  $95 \times 10^{-7}$  /K. See col. 8, lines 15-16. This range overlaps the range recited in instant claims 21 and 23.

As to the strain points recited in instant claims 19, 23, 29 and 30, the reference discloses glasses having strain points,  $T_1$ , that fall within the claimed ranges. See col. 6, lines 29-30, and col. 7, lines 12-14.

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As to claim 24, the reference fails to disclose the recited values of  $\phi^2 \cdot c/a$ . However, the value of the recited property for a glass is dependent upon the glass composition, and the how the glass is made. As noted above, the glass recited by Koch et al. has a glass composition that has overlapping ranges of components with the glass recited in instant claims 25-28. See col. 2, lines 1-22. Moreover, the glass is made in a manner that is identical to the method applicants' employ in forming their glass. In particular, the glass is melted, formed, and thermally toughened. See col. 6, lines 39-50 of Koch et al. and page 16, lines 1-12 of the specification. Accordingly, one of ordinary skill in the art would expect that the glass of Koch et al. would have the " $\phi^2 \cdot c/a$ " recited in instant claim 24.

As to the  $\log \rho_{(250^\circ)}$  recited in claims 29 and 30, the  $\log \rho_{(250^\circ)}$  of a glass is dependent upon its glass composition. The glass of Koch et al. has overlapping ranges with the glass of instant claims 25-28. See col. 2, lines 1-22. Accordingly, one of ordinary skill in the art would expect that the overlapping portion of the glass of Koch et al. would have the claimed property.

As to claims 31 and 32, the reference discloses that the glass may be used as a plate for fire-resistant panes, substrates for plasma screens, electro-luminescent screens or cold cathode screens. See col. 1, lines 5-11.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to establish *prima facie* obviousness. See MPEP 2144.05.

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### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 19, 20 and 23-32 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1-6, 8-16 and 18 of U.S. Patent No. 6,063,718 ('718). Although the conflicting claims are not identical, they are not patentably distinct from each other because the glass disclosed by the reference has overlapping ranges of disclosed properties and glass components. The reference fails to disclose all of the properties recited in the instant claims. However, one of ordinary skill in the art would expect that the glass disclosed in the claims of the reference would have the instantly claimed properties since the glass of the '718 patent has overlapping ranges of components with the glass recited in instant claims 19 and 25-28.

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Claims 19, 20 and 23-32 are directed to an invention not patentably distinct from claims 1-6, 8-16 and 18 of commonly assigned US Patent No. 6,063,718. Specifically, the glass of the claims of US Patent No. 6,063,718 has overlapping ranges of properties and glass components with the glass recited in instant claims 19, 20 and 23-32. One of ordinary skill in the art would expect that the glass of the reference would have the properties recited in the instant claims that are not disclosed in the reference, since the glasses have overlapping ranges of components and are made in the same manner.

Commonly assigned US Patent No. 6,063,718, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee is required under 37 CFR 1.78(c) and 35 U.S.C. 132 to either show that the conflicting inventions were commonly owned at the time the invention in this application was made or to name the prior inventor of the conflicting subject matter. Failure to comply with this requirement will result in a holding of abandonment of the application.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g).

Claims 19, 20 and 23-32 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1-9 of U.S. Patent No. 5,990,023 ('023).

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Although the conflicting claims are not identical, they are not patentably distinct from each other because the glass disclosed by the reference have overlapping ranges of disclosed properties and glass components. The reference fails to disclose all of the properties recited in the instant claims. However, one of ordinary skill in the art would expect that the glass disclosed in the claims of the reference would have the instantly claimed properties since the glass of the '023 patent has overlapping ranges of components with the glass recited in instant claims 19 and 25-28.

Claims 19, 20 and 23-32 are directed to an invention not patentably distinct from claims 1-9 of commonly assigned US Patent No. 5,990,023. Specifically, the glass of the claims of US Patent No. 5,990,023 has overlapping ranges of properties and glass components with the glass recited in instant claims 19-32. One of ordinary skill in the art would expect that the glass of the reference would have the properties recited in the instant claims that are not disclosed in the reference, since the glasses have overlapping ranges of components and are made in the same manner.

Commonly assigned US Patent No. 5,990,023, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee is required under 37 CFR 1.78(c) and 35 U.S.C. 132 to either show that the conflicting inventions were commonly owned at the time the invention in this application was

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made or to name the prior inventor of the conflicting subject matter. Failure to comply with this requirement will result in a holding of abandonment of the application.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g).

***Response to Arguments***

Applicant's arguments filed October 2, 2000 have been fully considered but they are not persuasive.

**Rejection under § 102(e) over Siedel et al. (US Patent No. 5,990,023)**

Applicants assert that Siedel et al. is not prior art because the reference has a filing date that is after the claimed priority date. This argument is not deemed persuasive. To successfully overcome a § 102(e) rejection, applicants must perfect their right to priority. To perfect their right to priority, applicants must submit a certified translation of their priority documents. See MPEP 706.02(b) .

**Rejection over Koch et al. (WO 96/11887)**

Applicants assert that Koch et al. fails to suggest a glass having over 55 wt% SiO<sub>2</sub> and a strain point of greater than 570°C. Applicants rely upon the examples of the reference for this assertion. This argument is not persuasive. A reference can be used for all that it fairly teaches, and is not limited to its examples for disclosure. See In re Van Marter, 144 USPQ 421. Koch et

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al. fairly suggests glasses having 45 to 68 wt% SiO<sub>2</sub> and a strain point of greater than 550°C.

See the abstract, and col. 5, lines 42-43. These ranges overlap the presently claimed ranges.

Obviousness-type double patenting rejection over Siedel et al. (US Patent No. 5,990,023)

Applicants assert that Siedel et al. does not qualify as prior art, and therefore, the obviousness-type double patenting rejection is not appropriate. This argument is not deemed persuasive. An obviousness-type double patenting rejection cannot be overcome by filing a certified translation of a priority document. An obviousness-type double patent rejection can only be overcome by successfully traversing the rejection, or by filing a terminal disclaimer.

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David R. Sample whose telephone number is (703)308-3825. The examiner can normally be reached on Monday to Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell can be reached on (703)308-3823. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3601 for regular communications and (703)305-3599 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.



David R. Sample  
Patent Examiner  
Art Unit 1755

DRS  
December 13, 2000